VOLVO

Construction Equipment

Service Information

Document Title:	Function Group:	Information Type:	Date:
Description	**000**	**Service Information**	**05-02-2024**
Profile:			

Description

Volvo A25C is an articulated hauler manufactured by Volvo Articulated Haulers AB.

A25C consists of two main sections, the tractor unit and the load unit. The two units are joined by the frame joint which allows movement about a vertical axis for steering. The hitch also allows the two units to twist and move in relation to each other along a horizontal axis.

The tractor unit consists of a six-cylinder, direct-injected, intercooled and turbocharged diesel engine that is rubber mounted on the frame together with the transmission. The tractor unit drive axle is independently suspended in relation to the frame.

The A25C articulated hauler has constant 4-wheel drive (64) with the possibility of engaging and disengaging 6-wheel drive (66). There is a longitudinal differential lock in the dropbox and there are transverse differential locks on all axles. All differential locks lock to one hundred percent.

The load unit consists of a frame, elevation load body and bogie drive axles.

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Document Title:	Function Group:	Information Type:	Date:
Product identification plates	**000**	**Service Information**	**05-02-2024**
Profile:			

Product identification plates

The following text with numbers refers to the illustration below, and shows which product identification plates should be on the machine.

The **P**roduct **I**dentification **N**umber **(PIN)** and machine model must always be correctly quoted when ordering spare parts and in any telephone inquiries or correspondence.

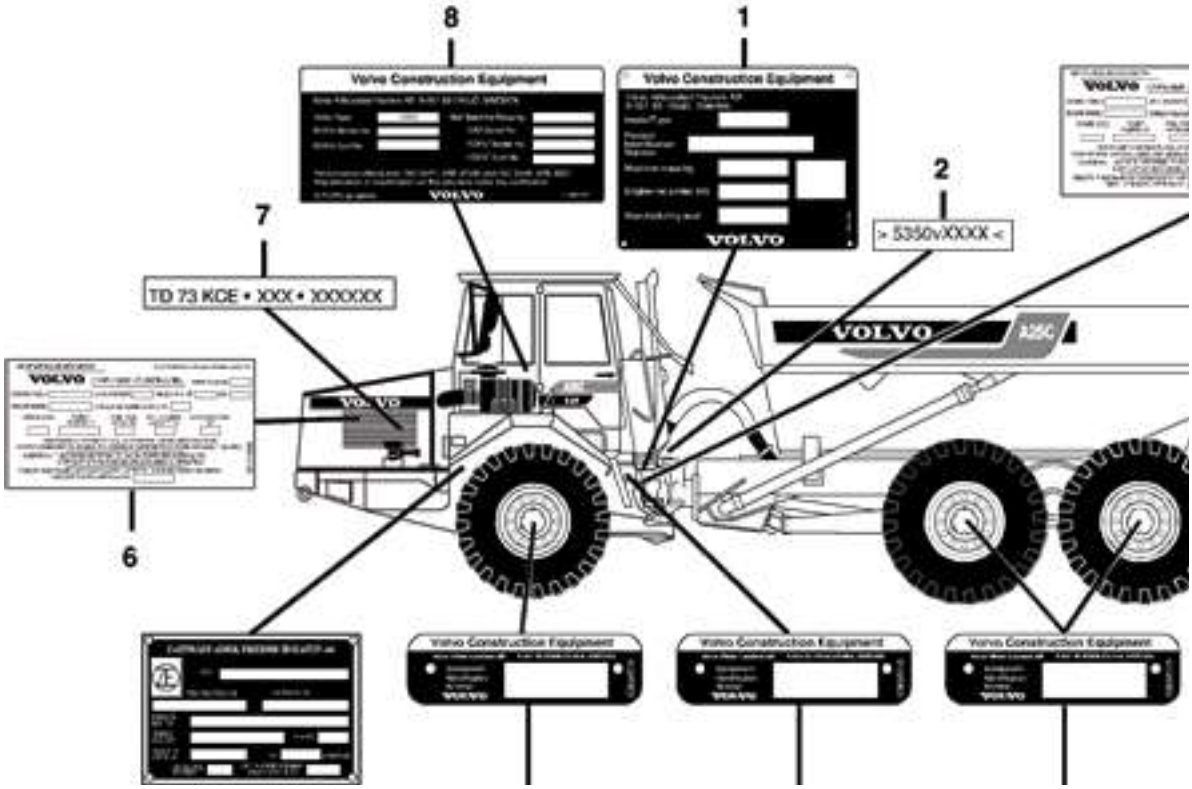

Figure 1
Product identification plates on A25C

1. Product plate with **P**roduct **I** dentification **N**umber, **PIN** for complete machine (includes model, product and serial number, machine weight, engine rated output and CE-approval). The plate is located on the left side of the tractor unit frame by the steering joint.
2. The machine serial number is also stamped on the right side of the tractor unit frame by the steering joint.
3. Drive axle serial numbers are located on the axle housing.
4. Dropbox serial number is located on the rear left side of the dropbox.
5. Transmission type designation and serial number is located on the right side of the transmission.
6. The decal "Important engine information" is located on the front of the engineand on the left side of the tractor unit frame by the steering joint.
7. Engine type designation, part and serial number is stamped into the left side of the engine block.
8. Cab type, type approval and serial number is located on the left inside the cab.

This is the sample of the manual if you need complete
manual
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Document Title: **Towing**	Function Group: **176**	Information Type: **Service Information**	Date: **05-02-2024**
Profile:			

Towing

It is not possible to start the engine by towing the machine. It is recommended that an A-shaped tow bar is used when towing.

Towing must only be done as described below:

Case 1, towing with the engine running

Check to make sure that there is oil in the transmission. **If there is sufficient oil in the transmission, the machine can be towed with the engine running.** The transmission will then be lubricated and steering is ensured.
The transmission gearshift selector must be in the neutral position.
If the engine does not start or if there is insufficient oil in the transmission, tow the machine according to case 2.

Case 2, towing without the engine running

CAUTION

When towing without the engine running, the transmission does not receive any lubrication. The following instructions MUST be followed:

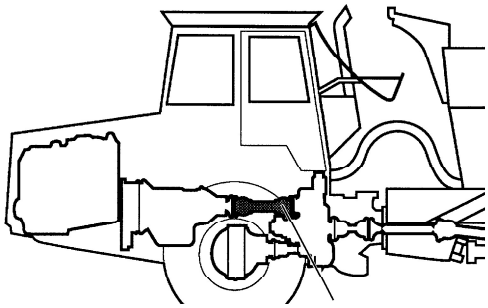

Figure 1

A. Drive flange

Remove the bolts between the drive flange (A) on the dropbox and the propeller shaft on the transmission. Suspend the propeller shaft on the transmission and press back the dropbox so that the drive flange can rotate freely. The ground dependent pump, driven by the dropbox, will then safeguard the steering function.
If the parking brake is applied and the compressed air system is empty, the system can be filled through the filler valve, see Operator's Manual, section "Filling compressed air system".
If compressed air is not available, the parking brake must be released manually.

WARNING

The parking brake and service brake are now non-operational. Towing must only be performed if the machine is connected to another vehicle with a tow bar.

Alternative to case 2

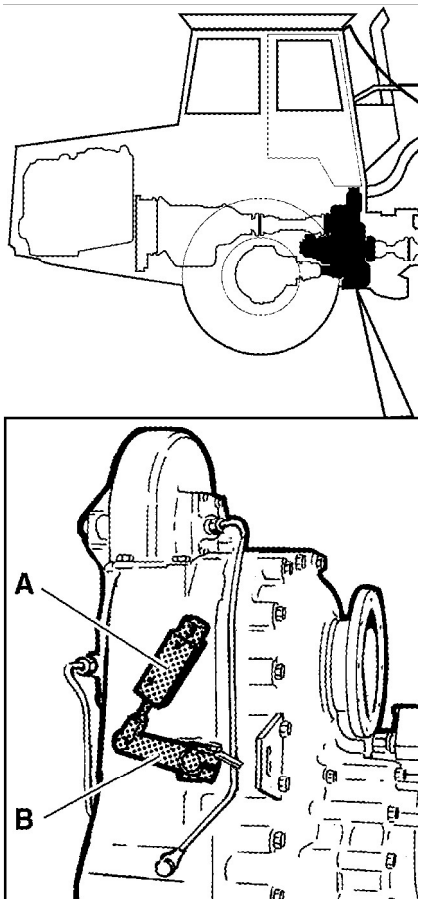

Figure 2

A. Control cylinder
B. Control rod

The dropbox (High-Low range) can be locked in the disengaged position as an alternative.
Remove the control cylinder A and set the control rod B in the middle position. With the control rod in the middle position, neither High or Low range is engaged.
In order for the control rod to remain in the middle position, the distance between the pins (where the control cylinder was mounted) and the control rod must be measured, and a bracket for locking the control rod in position must be made.
During towing, the transmission is disengaged but the secondary steering is ensured by the ground dependent pump.

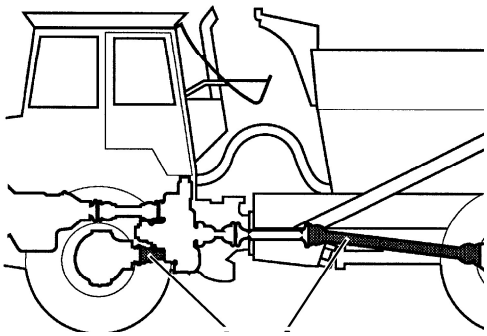

Figure 3

A. Propeller shafts

Case 3

The front and rear propeller shafts must be removed when there is a dropbox malfunction.
The engine must run at idle speed in order to safeguard steering and braking functions.
The (transmission) gearshift selector must be in the neutral position.

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Service Information

Document Title: **Automatic timing adjuster (alpha adjuster)**	Function Group: **238**	Information Type: **Service Information**	Date: **05-02-2024**
Profile:			

Automatic timing adjuster (alpha adjuster)

General

The automatic timing adjuster is located between the pump gear in the transmission housing and the injection pump. Its function is to advance injection (from 8 to 14° BTDC) at an engine speed above 2000 rpm.

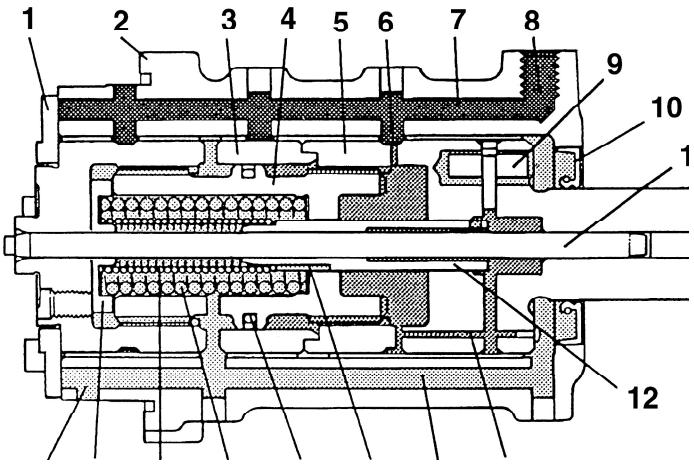

Figure 1
Automatic timing adjuster. Figure shows automatic timing adjuster in fully adjusted position.

1. Thrust bearing (thrust washer)
2. Bearing housing
3. Front flange
4. Piston
5. Rear flange
6. Oil groove
7. Pressure oil passage
8. Oil inlet
9. Centrifugal weight (4 pcs)
10. Rear seal
11. Torsion shaft
12. Control sleeve
13. Oil groove
14. Return oil passage
15. Groove, control sleeve (4 pcs)
16. Piston seal
17. Compression spring, piston
18. Compression spring, control sleeve
19. Adjusting sleeve (spring seat)
20. Return oil outlet

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Construction Equipment

Service Information

Document Title: **Automatic timing adjuster, checking**	Function Group: **238**	Information Type: **Service Information**	Date: **05-02-2024**
Profile:			

Automatic timing adjuster, checking

Op nbr 23631

999 3721 Service display unit
11 668 003 Measuring instrument

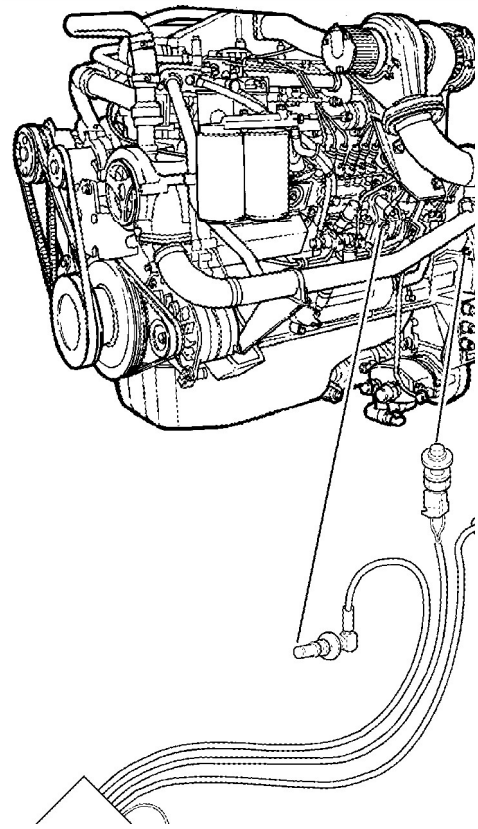

Figure 1

Measuring instrument 11 668 003 consists of an electronic unit, cabling and two sensors. The sensors sense the difference between a hole in the flywheel, showing when cylinder 1 passes top dead centre (TDC), and a cam on the pump shaft which indicates the position when fuel injection begins on cylinder no. 1. Read off on service display unit 999 3721.

1. Open the engine hood. Remove the cover over the inspection hole and the plug on the flywheel housing.

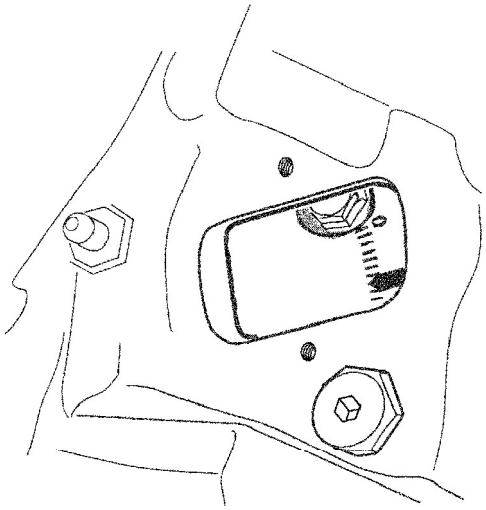

Figure 2

2. Check if the degree markings on the flywheel are visible in the hole. If no marking is visible, then the sensor can be fitted in the threaded hole where the plug was installed. If markings are visible, the crankshaft is rotated a quarter of a full turn. This is so that the sensor does not end up in the measuring hole on the flywheel when it is adjusted.

WARNING

Do not turn the crankshaft with a short extension and do not keep arms under the engine hood catch. The catch may release and the arm is then trapped under the hood.

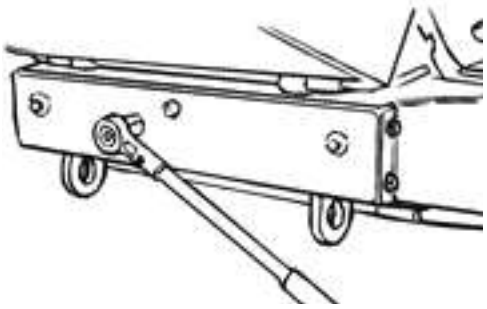

Figure 3

Rotate the crankshaft by using:
Ratchet handle with 3/4" drive
Extension
Socket 13/16"

3. Screw in the threaded bushing in the flywheel housing. Then, screw in the sensor until it reaches the flywheel. Only screw in the sensor by hand until it just reaches the flywheel. Then, back off the sensor one and a half (1) turns and lock the sensor with the lock nut.

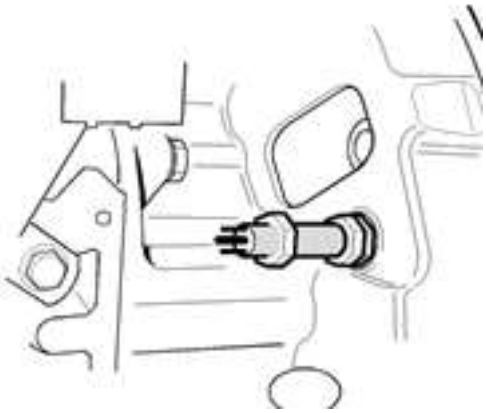

Figure 4

4. Fit the sensor in the fuel injection pump regulator housing. Be prepared with a container to collect the oil that drains (approx. 0.3 litres (0.08 US gal)). Try to minimize the amount of oil that drains by quickly fitting the sensor when the plug is removed.

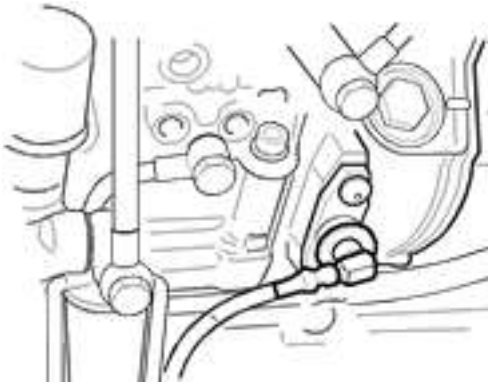

Figure 5

5. First, connect sensors and the service display unit with the electronic unit. Then plug in to the power supply in the cigarette lighter.

6. The start display is shown for 4 seconds.

Figure 6

7. Then, the adjoining display is shown.

Figure 7

8. Start the engine. If the sensors are operating correctly, the figure is shown. Proceed to step 11.

Figure 8

9. If fuel injection pump sensor is not operational, the adjoining figure is shown. Make sure that the sensor is screwed in all the way.

Figure 9

10. If the sensor in the flywheel housing is not functioning or if the sensor is not screwed out one and a half (1) turns from the flywheel, the adjoining figure is shown.
Check the connector as well.

Figure 10

11. If the sensors are functioning, press .
The adjoining figure is shown.

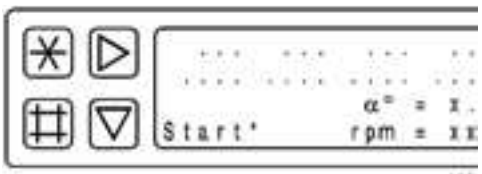

Figure 11

12. Increase engine speed to 1300 rpm. Press ✳ to set the zero point. See adjoining figures.

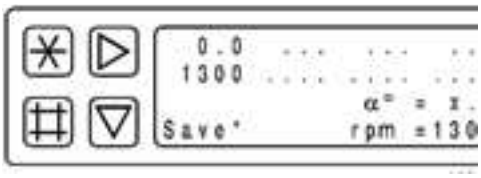

Figure 12

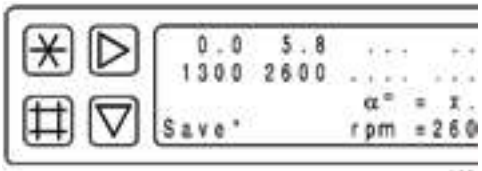

Figure 13

13. Increase engine speed to 2600 rpm. Press ✳ and see adjoining figures.

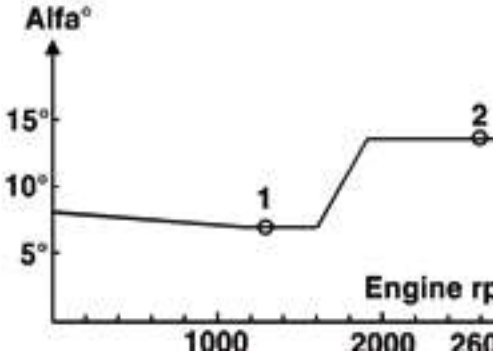

Figure 14

Maximum angle adjustment should now be complete.
The adjustment should be 6°±1°.

NOTE!
After measuring, the alpha°-value may show 0.5°–1.5° at low idle.

This is due to clearance in the fuel pump gear drive.

14. Press ✳ three times to start a new series of measurements.

15. Restore to operating condition by unplugging the power supply, then remove the electronic unit, service display unit and the two sensors. Refit the plugs and the cover over the inspection hole.

16. Remove the plug and top up with engine oil in the regulator housing. Top up with the same amount of oil that drained when the plug for the measuring instrument sensor was removed.

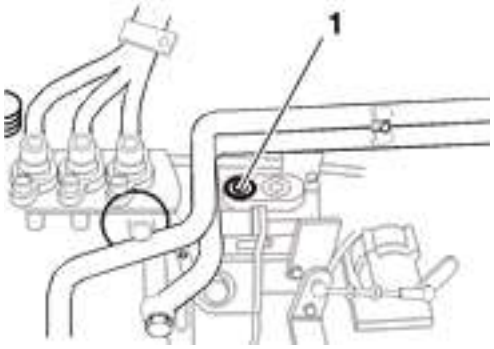

Figure 15

1. Plug

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Service Information

Document Title: **Low emission engines**	Function Group: **230**	Information Type: **Service Information**	Date: **05-02-2024**
Profile:			

Low emission engines

According to governing laws, all low emission engines must meet regulated norms for emissions (exhausts). In order to make sure that all requirements are fulfilled, the engine is thoroughly and carefully specified and adjusted. Certain parts are locked and/or affixed with a seal to prevent unauthorized adjustments. On engine TD73KCE, this applies to the fuel injection pump and the injection timing (alpha).

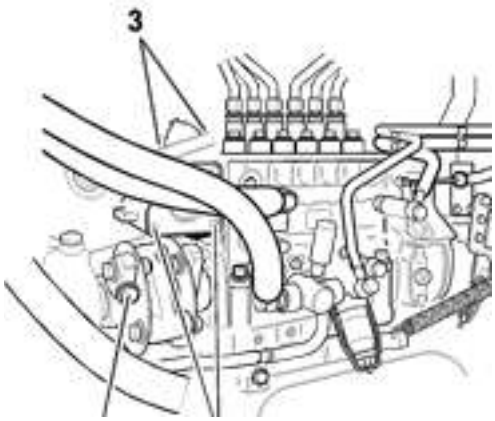

Figure 1

1. Bolt for clamp on coupling for setting injection timing (alpha). The bolt is locked by a lock sleeve.
2. The cover over the adjusting screw is locked by two break-off screws.
3. The cover over the smoke limiter is locked by two break-off screws.

⚠ CAUTION

Adjustments and settings of functions affixed with a lock/seal must only be serviced by workshops authorized by Volvo or Bosch.

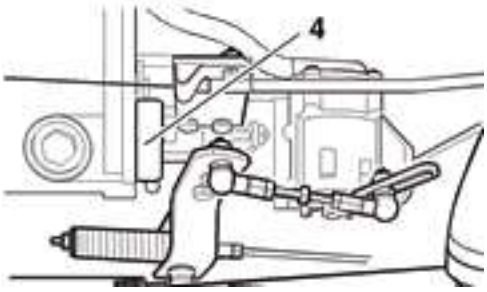

Figure 2

4 Setting screw for adjusting high rpm. Locked by cover plate and break-off screw.

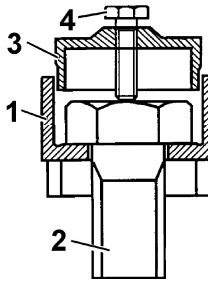

Figure 3
Lock device for clamping bolt, pump coupling

1. Sleeve
2. Bolt for clamp
3. Lock sleeve
4. Puller bolt, 999 3824-3

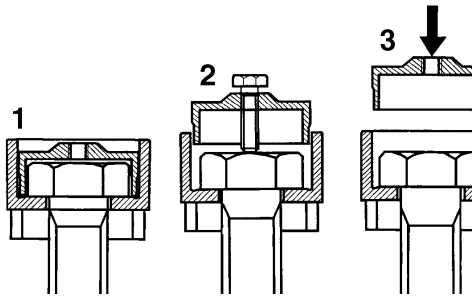

Figure 4

1. Bolt for clamp on pump coupling, locked
2. Removing lock sleeve
3. Fitting lock sleeve

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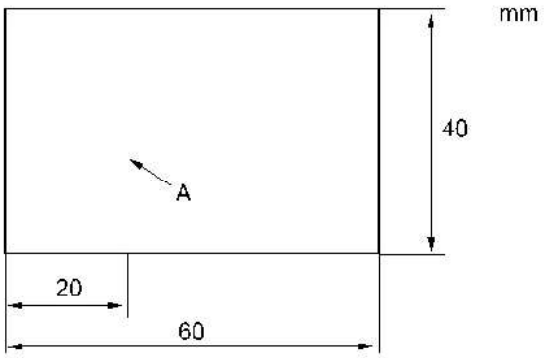
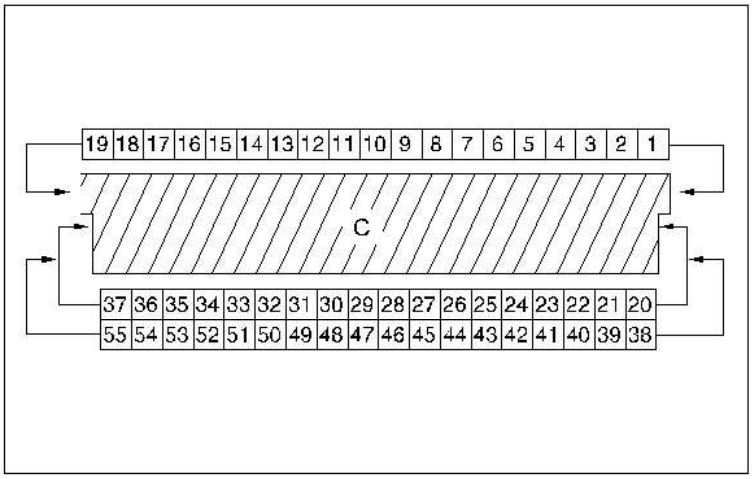
Service Information

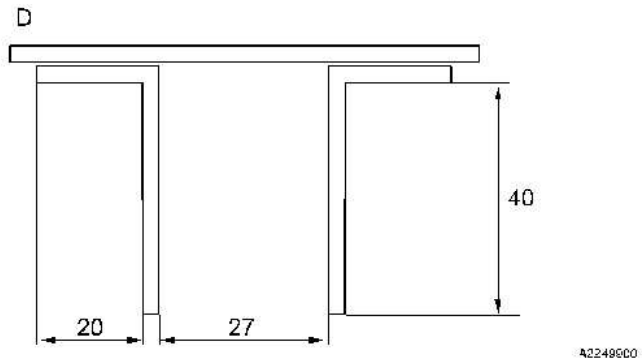
Document Title: **Template for pin numbers connector X1/A1**	Function Group: **371**	Information Type: **Service Information**	Date: **05-02-2024**
Profile:			

Template for pin numbers connector X1/A1

Cut out the template and cover it with plastic film. Fasten two "springs" on the underside of the template as shown in the figure. Fasten the template on the connector by folding the lock brace over the "springs".







A. Fold
B. Template
C. Cut out hole for connector
D. Tape springs on template

VOLVO
Construction Equipment

Service Information

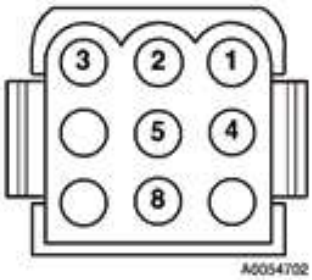
Document Title: **Code legend for connectors (serial no. –11100, BR –70300, US 6x6 –61400, 4x4 –68200)**	Function Group: **371**	Information Type: **Service Information**	Date: **05-02-2024**
Profile:			

Code legend for connectors

Connector A

Circuit no.	Marking in diagram	Function	Position on machine
8, 11, 38, 52	A	Connection of components in engine hood, headlights, direction indicators, horn H1	By right hinge on engine hood

Plug-in side



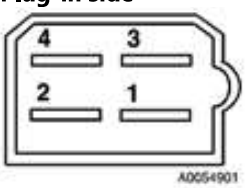
Pin side

Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	8	L	W	1	L	W	1	Direction indicators, left L28
2	38	58R	GN	1	58R	GN	1	Parking light, left L34
3	52	58L	W/GN	1	58L	W/GN	1	Parking light, right L47
4	8	R	GR	1	R	GR	1	Direction indicators, right L33
5	11	73	W/SB	1	73	W/SB	1	Horn H1
8	8, 11, 38, 52	31	SB	1	31	SB	2	Ground connection

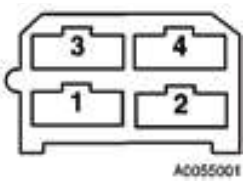
Connector B

Circuit no.	Marking in diagram	Function	Position on machine
57, 59	B	Connector for headlights	In battery compartment, left fender

Plug-in side



Pin side

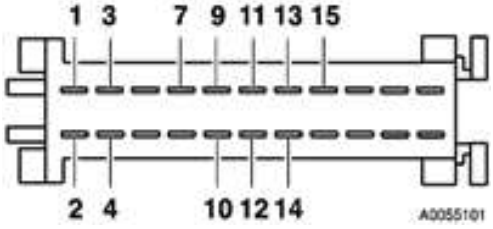


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	57	56AL	W	1	56AL	W	1	High beams, left L49
3	57, 59	31	SB	1	31	SB	1	Ground connection
4	59	56BL	Y	1	56BL	Y	1	Low beams, left L51

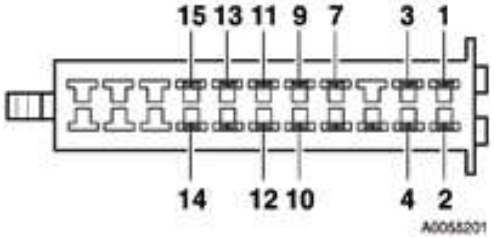
Connector BN1/X3

Circuit no.	Marking in - diagram	Function	Position on machine
37a, c, d, e, k	BN1	Connection to transmission cabling X3	Behind bracket plate for vent hose in front left lower corner of cab, below left electrical distribution box

Plug-in side



Pin side

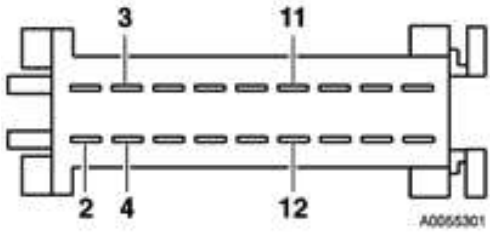


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	37a	59	W/SB	1	620	W	1	Signal to relay R 7 start interlock, grounding via gearshift ZV in neutral position
2	37a	31	SB	1	624	W	1	Grounding start interlock gearshift selector ZV, see pin 1 above
3	37c	151	W	1	628	W	1	Signal to relay R27 back-up light
4	37k	159	GR	1	632	W	1	Signal to relay R32 reduced retarder 1st gear forward
7	37d	152	Y	1	644	W	1	From pressure switch SW 13 for retarder engagement via ECU
9	37k	9A	W/BL	1	652	W	1	From sensor GV5 transmission oil temperature to instrument I7 transmission oil temperature
10	37a	24E	W/R	1	656	W	1	Feed from fuse S24 to ECU
11	37a	24E	W/R	1	660	W	1	Feed from fuse S24 to ECU
12	37d	24	R	1	664	W	1	Feed from fuse S24 to ECU
13	37e	157	GN	1	668	W	1	Not used
14	37e	31	SB	1	672	W	1	Ground connection
15	37e	31	SB	1	680	W	1	Ground connection

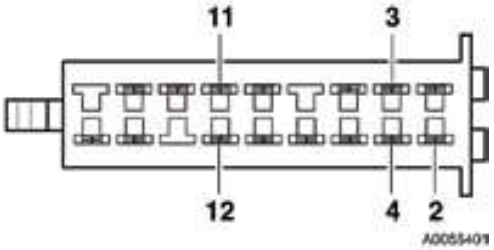
Connector BN2/X4

Circuit no.	Marking in - diagram	Function	Position on machine
37e, i, j	BN2	Connection to transmission cabling X4	Behind bracket plate for vent hose in front left lower corner of cab, below left electrical distribution box

Plug-in side



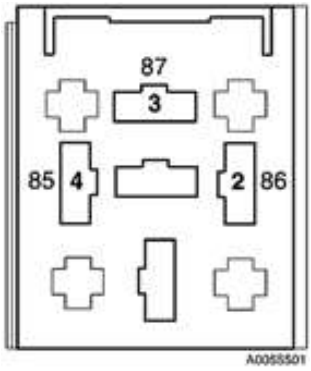
Pin side



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
2	37e	158	GN/R	1	694	W	1	Signal to relay R34 for buzzer engagement
3	37e	24	R	1	698	W	1	Feed from fuse S25 to ECU
4	37i	155	BN	1	702	W	1	Signal to relay R13 for anti-throttle engagement
11	37e	153	BL/Y	1	730	W	1	Signal to exhaust retarder from switch SW25 and from SW13 via diode D23 to ECU
12	37j	94	W/R	1	734	W	1	Signal to relay R29 for exhaust retarder engagement

Relay base BR2

Circuit no.	Marking in - diagram	Function	Position on machine
29	BR2	Connection to BR2 flash relay central warning	In left electrical distribution box

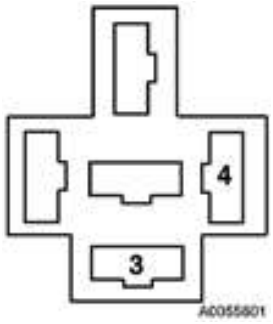


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
2	29	31	SB	1				Ground connection
3	29	38A	GN/R	1				To central warning light L17
4	29	38	GN/Y	2				Feed from relay R8 central warning. To relay R34 buzzer

engagement

Connector BS1

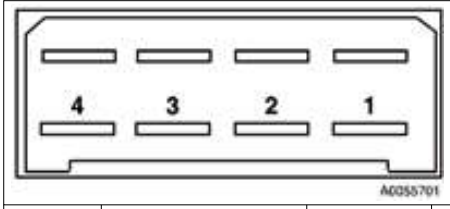
Circuit no.	Marking in - diagram	Function	Position on machine
30	BS1	Connection to buzzer BS1	In left electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
3	30	31	SB	1				Ground connection for buzzer BS1
4	30	38	GN/Y	1				Feed to buzzer BS1 from relay R34

Connector CA

Circuit no.	Marking in - diagram	Function	Position on machine
56 – 59	CA	Connection to circuit board right electrical distribution box	In right electrical - distribution box

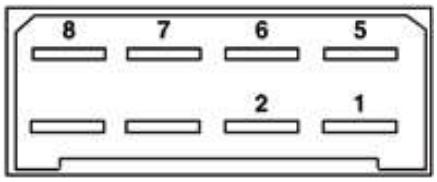


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	58	56BL	Y	1				From fuse S1 to right low beam L50
2	59	56BL	Y	1				From fuse S2 to right low beam L51
3	56	56AR	W	1				From fuse S3 to right high beam L48
4	57	56AL	W	1				From fuse S4 to left high beam L49

Connector CB

Circuit no.	Marking in diagram	Function	Position on machine

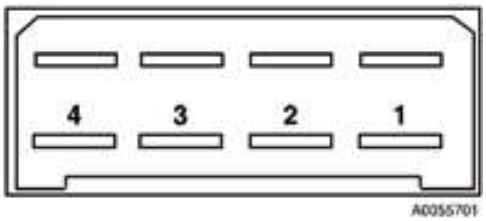
8, 9, 11, 38, 45	CB	Connection to circuit board right electrical distribution box	In right electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	11	73	W/SB	1				From circuit board to horn H1
2	9							From fuse S17, not used
5	45	58L	W/GN	1				From fuse S21 to right parking light on hood L47
6	38	58R	GN	1				From fuse S20 to left parking light on hood L34
7	8	L	W	1				From circuit board to left direction indicator on hood L28
8	8	R	GR	1				From circuit board to right direction indicator on hood L33

Connector CC

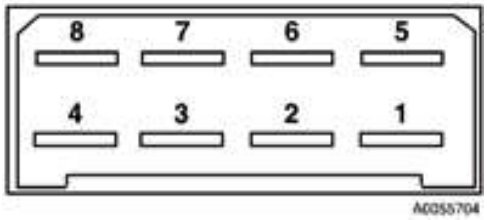
Circuit no.	Marking in diagram	Function	Position on machine
8, 39, 45	CC	Connection to circuit board right electrical distribution box	In right electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	45	58L	W/GN	1				From fuse S21 to running light right front fender L45 and to parking light left front fender L46
2	39	58R	GN	1				From fuse S20 to parking light right front fender L35 and to running light left front fender L36
3	8	L	W	1				From circuit board to direction indicator left front fender L29
4	8	R	GR	1				From circuit board to direction indicator right front fender L32

Connector CD

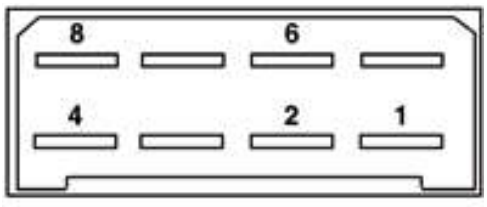
Circuit no.	Marking in - diagram	Function	Position on machine
10, 14, 18, 20, 21, 62	CD	Connection to circuit board right electrical distribution box	In right electrical - distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	62	54	Y	2				From brake light switches V12 and V13 to circuit board
2		70	Y	1				Not used
3	14	17	Y/BL	1				Not used
4	18	2	BN	1				From hydraulic oil level sensor V3 to circuit board
5	62	55	GN/Y	2				From fuse S5 to brake light switches V12 and V13
6	10	83	GN/R	1				From circuit board to windshield washer motor SM1
7	20	9	W/BL	1				From transmission oil temperature sensor I7 to circuit board, to warning light high oil temperature transmission L8
8	21	14	GR	1				From air filter indicator V6 to circuit board, to warning light I15 and central warning

Connector CE

Circuit no.	Marking in - diagram	Function	Position on machine
2, 4, 16, 24, 34	CE	Connection to circuit board right electrical distribution box	In right electrical distribution box

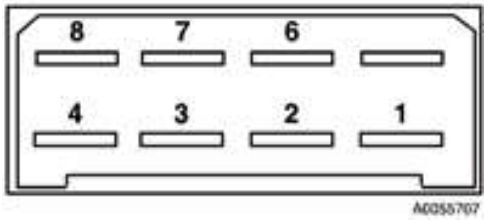


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	16	8	W/SB	1				From oil pressure switch engine V2 to circuit board
2	24							Not used
4	4	19	Y	1				From circuit board, signal to relay preheating coil (start

								element) R9
6	34	20	GN	1				From fuel level sensor GV2 to circuit board
8	2	50	GN	1				From start interlock relay R7 on circuit board to starter motor, signal starter motor relay

Connector CF

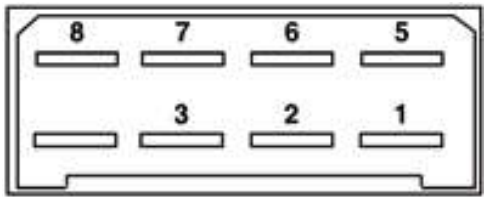
Circuit no.	Marking in - diagram	Function	Position on machine
4, 13, 17, 33, 35, 36	CF	Connection to circuit board right electrical distribution box	In right electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	17	7	Y	1				From temperature sensor coolant engine GV1B to circuit board (central warning)
2	4	79	BL/Y	1				From temperature sensor coolant engine GV1A to circuit board (preheating coil engagement)
3	36	22	GN	1				From speed sensor engine GV3 to circuit board
4	36	23	GN/Y	1				From speed sensor engine GV3 to circuit board
6	35	21	W/BL	1				From temperature sensor coolant engine GV1C to circuit board (instrument I2)
7	13	31A	SB	1				From fuse FH3 (battery – terminal) in battery compartment to circuit board
8	33	61	W	1				From alternator to circuit board (charging control light)

Connector CG

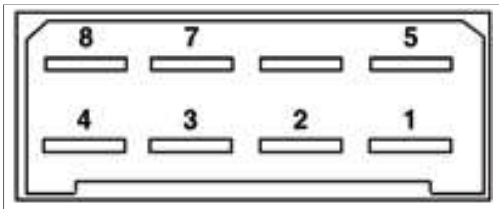
Circuit no.	Marking in - diagram	Function	Position on machine
13, 14, 32, 33, 36, 65	CG	Connection to circuit board right electrical distribution box	In right electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	65	44	BL/R	1				From fuse S6 to switch work lights front SW18
2	14	1	R	2				From fuse S14 to Kc5 on circuit board for control lights, also feed to engine speed relay R11 and fan speed relay R37
3	33	61	W	1				From circuit board to charging control light L9
5	36	22	GN GN	2				From circuit board (from engine speed sensor GV3) to engine speed relay R11 From circuit board to information decoder ECU2
6	36	23	GN/Y W/BN	2				From circuit board (from engine speed sensor GV3) to engine speed relay R11 From circuit board to information decoder ECU2
7	32	61A	W	1				From circuit board to hour meter I3
8	13	31A	SB BL/ SB	2				From circuit board to speedometer/tachograph 15A/15B and to voltage converter SOM

Connector CH

Circuit no.	Marking in - diagram	Function	Position on machine
4, 10, 20, 34, 35, 37j, 45	CH	Connection to circuit board right electrical distribution box	In right electrical - distribution box

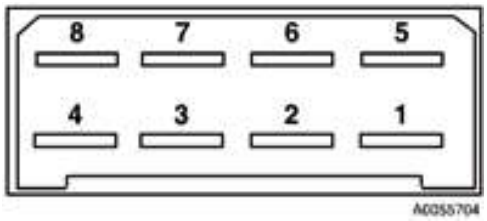


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	37j	40	BL BL	2				To circuit board from relay exhaust retarder R29 via GA2 From circuit board to control light for exhaust retarder L25

2	20	9	W/BL	1				From circuit board (from temperature gauge I7) to control light for transmission oil temperature L8
3	45	16	BL	1				From fuse S21 to switch instrument guide lights SW10 via Ka3 and to control panel light L64 via N5
4	10	83	GN/R	1				From switch windshield washer SW4F to circuit board (to washer motor SM1)
5	4	19	Y Y	2				From switch preheating (preheating coil) SW28 to circuit board From circuit board to control light preheating (preheating coil) L13
7	34	20	W/R	1				From circuit board (from fuel level sensor GV2) to fuel gauge I4 via Ka5
8	35	21	W/BL	1				From circuit board (from engine temperature sensor GV1C) to temperature gauge I2 via Kb7

Connector CJ

Circuit no.	Marking in - diagram	Function	Position on machine
8, 37e, 45, 54, 55, 58, 97, 98	CJ	Connection to circuit board right electrical - distribution box	In right electrical distribution box

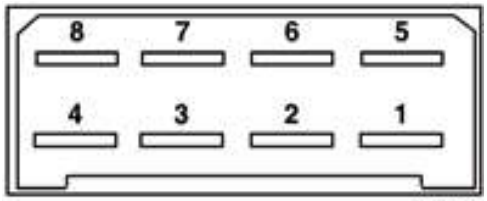


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	8	49	GN/Y	1				From circuit board (flash relay BR1) to switch flashing hazard lights SW3
2	8	49A 49A	GN GN	2				From circuit board (flash relay BR1) to direction indicator switch SW4A From circuit board (flash relay BR1) to switch flashing hazard lights SW3
3	8	30B	W/R	1				From circuit board (flash relay BR1) to switch flashing hazard lights SW3
4	98	31	SB	1				Ground connection: guide light switch longitudinal differential

								lock & 6-wheel drive LC46 and guide light transverse differential lock, front axle LC47
5	45	30A 30A	R R	2				From fuse S8 to switch headlights SW26 From fuse S8 to switch high beam flash SW4D
6	54	56A	W	1				Signal from switch high beam flasher SW4D and switch high/ low beams SW4C to high beam relay R2
7	55	10	W/GN	1				From circuit board (fuse S3) to control light high beams L10 via Kb9
8	58	56B	Y	1				Signal from switch high/low beams SW4C to low beam relay R1

Connector CL

Circuit no.	Marking in - diagram	Function	Position on machine
8, 14, 16, 18, 21, 23, 28	CK	Connection to circuit board right electrical distribution box	In right electrical - distribution box

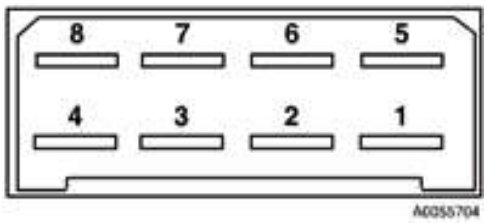


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	23	5	W	1				From pressure sensor brake system Vl1 to circuit board (central warning)
2	21	14	GR					From circuit board (air filter indicator V6) to control light for air filter L15 via Kb3
3	18	2	BN	1				From circuit board (hydraulic oil level sensor V3) to control light for hydraulic oil level L1 via Kc6
4	28	24 24	W/BN W/BN	2				From engine speed relay R11 to circuit board (warning overspeeding engine) to central warning From circuit board to warning light overspeeding engine L16
5	16	8 8	W/SB W/SB	2				From circuit board (oil pressure switch V2) to control light oil pressure L7 via Ka1 From circuit board (oil pressure switch V2) to information

								decoder ECU2
6	14	17A	Y	1				Not used
7	8	11	W/R	1				From circuit board (flash relay BR1) to control light direction indicators L11
8	8	12	BL/Y	1				From circuit board (flash relay BR1) to control light direction indicators L12

Connector CL

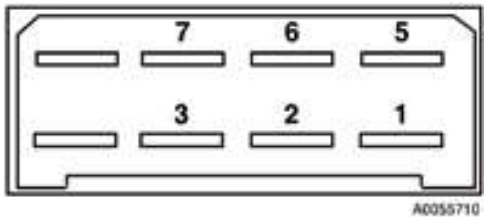
Circuit no.	Marking in - diagram	Function	Position on machine
4, 8, 11, 27, 29, 70	CL	Connection to circuit board right electrical distribution box	In right electrical - distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	8	R	GR	1				From switch hazard flashers SW3 to circuit board (left hazard flashing lights L31, L32, L33)
2	8	L	W	1				From switch hazard flashers SW3 to circuit board (left hazard flashing lights L28, L29, L30)
3	70	32	GN	1				From fuse S19 to switch cab fan SW8
4	11	73	W/SB	1				From switch horn SW4B to circuit board (to horn H1)
5	4	30	R	1				From fuse S10 to ignition SW2 and to KL2 (spare)
6	27	13	R	1				From circuit board to warning light brake hydraulics L3 via Ka8
7	4	15E	GN/R	1				From ignition SW2 to circuit board (to time relay preheating TR1 and central warning relay R8)
8	29	38	GN/Y	1				From circuit board to relay central warning BR2

Connector CM

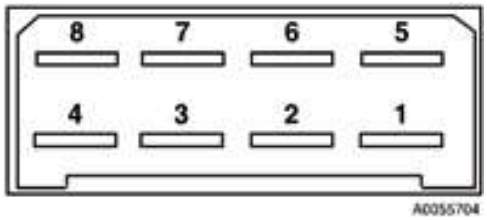
Circuit no.	Marking in - diagram	Function	Position on machine
3, 6, 7, 12, 60, 73	CM	Connection to circuit board right electrical distribution box	In right electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	73	45 77	BN BL/Y	2				From fuse S12 to service light connection U1 and cigarette lighter RA4 via M8 From fuse S12 to cab interior lighting SW12 and L59 via PB4
2	60	30RA	R	1				From fuse S13 to voltage converter SO via CR3
3	3	50A	GN	1				From ignition SW2 to circuit board (signal start relay R7)
5	12	57	R	1				From fuse S9 to speedometer/ tachograph 15A/15B
6	7	46	GN/R	1				From fuse S11 to switch rotating beacon SW20 via M7
7	6	15	R/W	1				From ignition to circuit board (signal relay R3 and R4)

Connector CN

Circuit no.	Marking in - diagram	Function	Position on machine
8, 9, 15, 45, 76	CN	Connection to circuit board right electrical distribution box	In right electrical distribution box

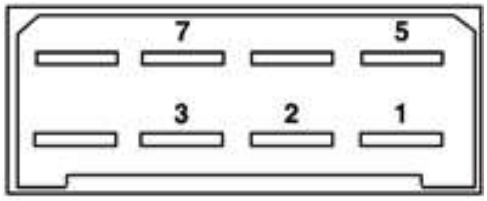


Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	76	13B	Y	1				From fuse S16 to relay brake hydraulics R23 (retrofitted, not included in cable harness)
2	76	15	R/W	2				From fuse S16 to information decoder ECU2 via PB7 and to switch all differential locks & 6-wheel drive SW48 via KM3, KM5
3	15	3	BL	1				From circuit board (differential pressure sensor engine dependent pump V17) to warning light steering system L6
4	9	53A 29	W/SB	2				From fuse S17 to wiper motor

			BL/Y					TM1 and switch SW4 From fuse S17 to switch heated seat SW24 and heated rear-view mirrors SW22 via L3
5	76	28 28	Y Y	2				From fuse S16 to control lights low water level U-version L21, differential lock front axle L23, ground dependent pump L27, high/low range L27A via L6 From fuse S16 to relay exhaust retarder R29 via GA1
6		70	Y	1				Not used
7	45	58	GN	1				Feed from switch headlights SW26 via M2 to fuse parking lights right S20 and parking lights left S21
8	8	15A	BL/R	1				From fuse S18 to switch flashing hazard lights SW3 via M6

Connector CO

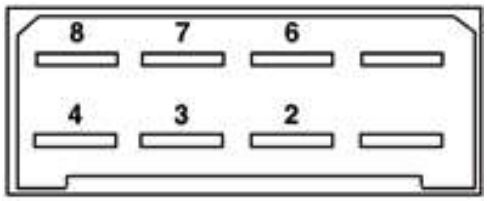
Circuit no.	Marking in - diagram	Function	Position on machine
3, 15, 26, 62, 86	CO	Connection to circuit board right electrical distribution box	In right electrical distribution box



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	3	59	W/SB	1				Ground connection to start interlock relay R7 from gearshift ZV via S1, UT3, BN1/X3, X2/A2
2	86	78	BL	2				From fuse S16 feed to sensor load body up V15, relay cooling fan R36
3	62	54	Y	1				From circuit board (brake light switches V12, V13) to brake lights L52, L53 via XA3, Y3, Z3, Z4
5	26	13A	W/R	1				From circuit board to diode D21 to relay R23 brake hydraulics (retrofitted, not included in cable harness)
7	15	3	BL	1				From diff pressure sensor engine dependent pump V17 to circuit board (to warning light steering system L2)

Connector CP

Circuit no.	Marking in - diagram	Function	Position on machine
8, 37c, 37j, 42, 45	CP	Connection to circuit board right electrical distribution box	In right electrical distribution box



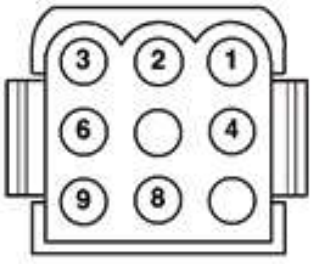
Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
2	37c	74	R	1				Feed from fuse S15 to back-up light relay R27 via S9, UT5
3	42	58R	GN	1				From fuse S20 to license plate light L37 and parking light L38 right rear
4	45	58L	W/GN	1				From fuse S21 to license plate light L44 and parking light L43 left rear
6	8	R	GR	1				From circuit board to direction indicator right rear L31 via XA5, Y4, Z5
7	8	L	W	1				From circuit board to direction indicator left rear L30 via XA4, Y5, Z6
8	37j	40	BL	1				From exhaust retarder relay R29 to solenoid valve exhaust retarder M1 via CZ2, XC11

Connector CR

Circuit no.	Marking in - diagram	Function	Position on machine
77, 91	CR	Connector	Right instrument panel

NOTE!
Relay base for TR1 is marked CR on earlier machines.

Plug-in side



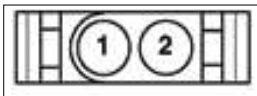
Pin side

Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and

								component designation
1	91	23	W/BR	1	23	W/BR	1	To information decoder ECU2 from engine speed sensor GV3
2	77	RA	Y	1	30RA	Y	1	Feed to voltage converter SO via ignition
3	77	30RA	R	1	30RA	R	1	Feed to voltage converter SO from fuse S13 (direct battery)
4	91	22	GN	1	22	GN	1	To information decoder ECU2 from engine speed sensor GV3
6	77	31A	BL/SB	1	31A	BL/SB	1	Ground connection to voltage converter for memory SOM from fuse FH3 in left battery compartment
8	91	199	BL/R	1	199	BL/R	1	From speed sensor GV7 on dropbox to information decoder ECU2
9	91	198	BL	1	198	BL	1	From speed sensor GV7 on dropbox to information decoder ECU2

Connector CRC

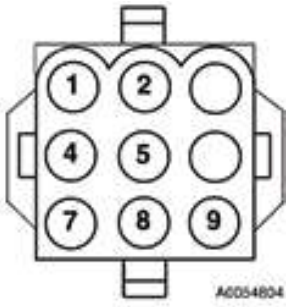
Circuit no.	Marking in - diagram	Function	Position on machine
77	CRC	Connection for voltage feed to communications radio, telephone, etc.	In overhead roof panel



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation
1	77	31	SB	1				Ground connection
2	77	+14VA	BL	1				Feed from voltage converter

Connector CRR

Circuit no.	Marking in - diagram	Function	Position on machine
77	CRR	Connection to radio/tape player	In overhead roof panel



Pin	Circuit no.	Marking	Colour	Number	Marking	Colour	Number	Function and component designation

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